

# Parts-In-Minutes®

## RP 6453 R/H

### FLAME RETARDANT RAPID SET / RAPID DEMOLD

### MEDIUM FLEXURAL MODULUS PROTOTYPE SYSTEM FOR MACHINE DISPENSING

Ren® RP 6453 resin and hardener is formulated to rapidly produce prototype parts from low-cost tooling. This system can be cast into molds made from silicone, polyurethane, or epoxy. Cured parts pass UL 94V-O1 at 1/8" thickness and have the look and feel of thermoplastic. The parts have high impact resistance, thermal resistance, and good dimensional stability. RP 6453 R/H permits demolding in 15 to 30 minutes, depending on configuration. This system is best suited for use with meter-mix dispensing equipment.

#### MIX RATIO

Resin to Hardener	By Weight: 75 to 100	By Volume: 67 to 100
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#### TYPICAL HANDLING PROPERTIES\*

	<u>ASTM Method</u>	<u>Resin</u>	<u>Hardener</u>	<u>Mixed</u>
Color	Visual	Dark brown	Cream	Caramel
Specific Gravity	D-1963	1.26	1.13	
Viscosity, cP	D-2393	200	2,000	
Gel Time, 150g, seconds	D-2471			50-70

**NOTE:** These physical properties are reported as typical test values obtained by our test laboratory. If assistance is needed in establishing product specifications, please consult with our Product Management Department.

#### RECOMMENDED CURE SCHEDULES

1. 77°F (25°C) at 7 days
2. 77°F (25°C) at 24 hours, plus 176°F (80°C) at 14 hours

#### TYPICAL CURED PROPERTIES\*

	<u>ASTM Method</u>	<u>Cure 1 Value</u>	<u>Cure 2 Value</u>
Density, lb./ft <sup>3</sup> (g/cm <sup>3</sup> )	D-792	77 (1.24)	77 (1.24)
Cubic Inch per Pound		22.3	22.3
Hardness, Shore D	D-2240	81	81
Flexural Strength, 5% strain, psi	D-790	7,300	7,200
Flexural Modulus, psi	D-790	194,000	191,000
Ultimate Tensile Strength, psi	D-638	4,800	5,000
Tensile Modulus, psi	D-638	201,000	200,000
% Elongation	D-638	7	7
Tg by DMA, E", °F(°C)	D-4065	275 (135)	284 (140)
Deflection Temperature, °F(°C)66 psi	D-648	208 (98)	221 (105)
264 psi		174 (79)	178 (81)
Ultimate Compressive Strength, psi	D-695	20,200	18,800
Compressive Modulus, psi	D-695	197,000	185,000
Izod Impact, notched, ft-lb./in	D-256	0.7	0.8
Coefficient of Thermal Expansion	D-3386		
-22 to 86°F, in/in/°F		62 x 10 <sup>-6</sup>	64 x 10 <sup>-6</sup>
-30 to 30°C, in/in/°C		112 x 10 <sup>-6</sup>	115 x 10 <sup>-6</sup>
Flame Test, UL 94V-O, Specimen 5x0.5x0.125"		Passes	Passes

\* Tested @ 77°F (25°C) unless otherwise noted.

**SAFETY:** Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

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